1. [illegible]

21:10 [illegible]

2. [illegible] P20 [illegible]

[illegible]

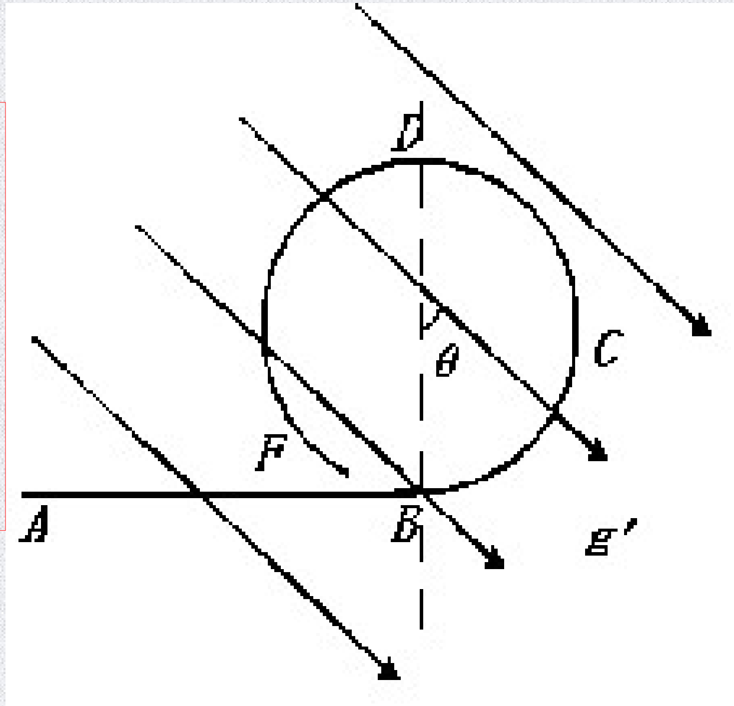
[illegible]

18. [illegible] 1—B—16 [illegible] ABCDF [illegible] BCDF [illegible] R [illegible] E [illegible] m [illegible] A [illegible] AB [illegible]

[illegible] - [illegible]

[illegible]

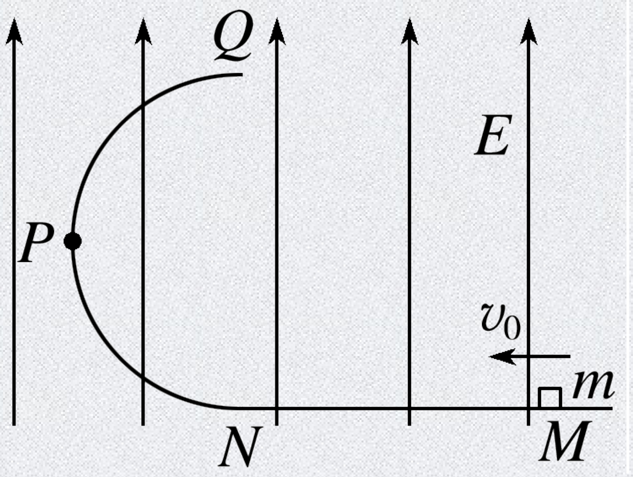
[illegible] - [illegible] 0- [illegible]



[illegible] [illegible] E [illegible] 1.0×10^{3} V/m [illegible] QPN [illegible] MN [illegible] N [illegible] R [illegible] 40 cm [illegible] N [illegible] P [illegible] QN [illegible] q [illegible] $1.0\times10^{[illegible]4}$ C [illegible] m [illegible] 10 g [illegible] μ [illegible] 0.15 [illegible] N [illegible] 1.5 m [illegible] M [illegible] g [illegible] 10 m/s^2 [illegible]

(1) [illegible] Q [illegible] v_0 [illegible]

(2) [illegible] P [illegible]



[illegible]

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1. □□□□□□□□

(1) □□□□□□□ $F_{□}$□ 0 □□□□□□□□□□□□□□□

(2) □□□□□□□ $F_{□} \neq 0$ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

2.□ □ □ □ □ □ □ □

a□ $\frac{qE}{m}$□ E□ $\frac{U}{d}$□ v^2□ v_0^2□ $2ad$.

□□□□□□□□□□

3.□ □ □ □ □ □ □

□ □ □ □ □ □ W□ Eqd□ qU□ $\frac{1}{2}mv^2$□ $\frac{1}{2}mv_0^2$

□ □ □ □ □ □ □ W□ qU□ E_{k2}□ E_{k1}

□□□□□

□□□□□□□□□□□□□□□□□□□□□□□□□□□ A □ B □□□□ d □□□□□□□

□□ O □ P. □□□□□□□□□ v_0 □ O □□ OP □□□□□□□□□□ P □ . □□□ B

□□□□□□□ d □□□□□□□□ P' □□□□□□□□

A. □□□ A □ B □□□□□□□□□□□□ C □□

$$C = \frac{\varepsilon_r S}{4\pi k d}$$

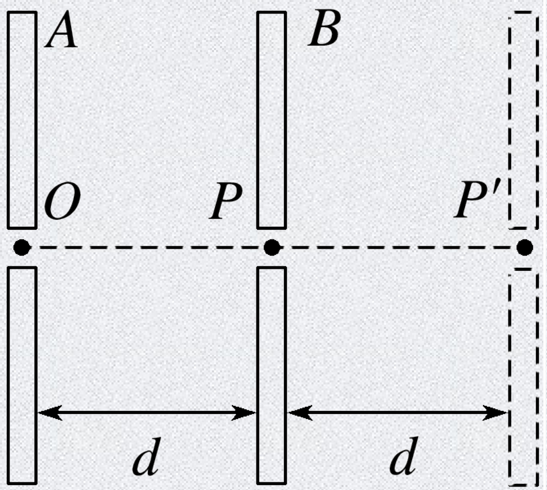
B. □□□ A □ B □□□□□□

C. □□□□□□□□□□□□□□□□□□

$$C = \frac{Q}{U}$$

√ D. □□□□□□ O □□□□□ $2v_0$

$$E = \frac{U}{d} = \frac{4\pi k Q}{\varepsilon_r S} \propto \frac{1}{\varepsilon_r S}$$

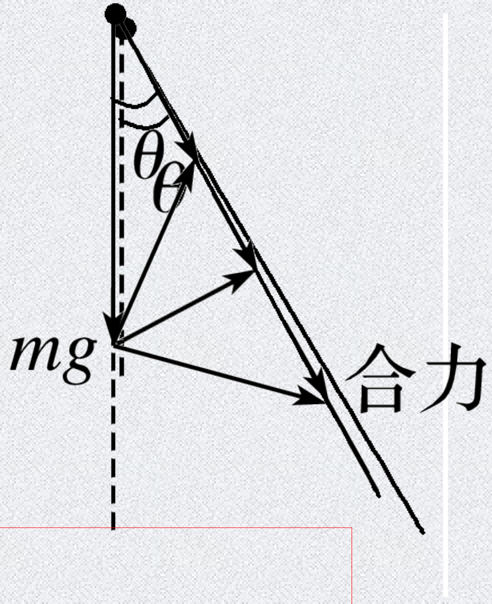


D □□□□

([illegible]) [illegible] m [illegible] q [illegible]

[illegible] θ [illegible] g [illegible]

[illegible]



A. [illegible] $\frac{mg}{q}$ [illegible]

B. [illegible] $\frac{mg\sin\theta}{q}$

√ C. [illegible] [illegible] = [illegible]

√ D. [illegible] [illegible]

[illegible] ([illegible]) [illegible]

1. [illegible]

(1) [illegible] [illegible]

a. [illegible] $t=\frac{l}{v_0}$.

b. [illegible] $y=\frac{1}{2}at^2=\frac{qU}{2md}t^2$，$t=\sqrt{\frac{2mdy}{qU}}$.

(2) [illegible]

[illegible] $a=\frac{F}{m}=\frac{qE}{m}=\frac{qU}{md}$

[illegible] $y=\frac{1}{2}at^2=\frac{qUl^2}{2mdv_0^2}$.

[illegible] $\tan\theta=\frac{v_y}{v_0}=\frac{qUl}{mdv_0^2}$.

2. [illegible]

(1) [illegible]

[illegible] $qU_0=\frac{1}{2}mv_0^2$

$y=\frac{1}{2}at^2=\frac{1}{2}\cdot\frac{qU_1}{md}\cdot(\frac{l}{v_0})^2$

$\tan\theta=\frac{qU_1l}{mdv_0^2}$

[illegible] $y=\frac{U_1l^2}{4U_0d}$ [illegible] $\tan\theta=\frac{U_1l}{2U_0d}$

(2) [illegible] O [illegible]

3.□□□□

□□□□□□□□□□□ v□□□□□□□□□□□□□□□

qU_y□$\frac{1}{2}mv^2$□$\frac{1}{2}mv_0^2$□□□ U_y□$\frac{U}{d}y$□□□□□□□□□□□□.

[illegible]．[illegible]①[illegible]②[illegible]③[illegible]．[illegible]

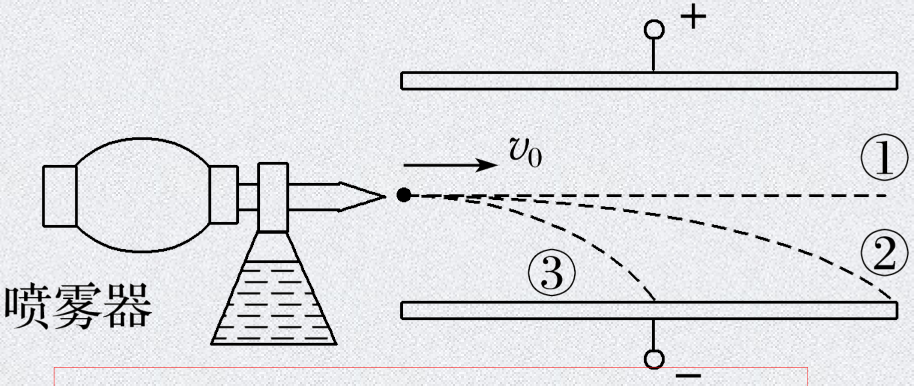
[illegible]

A. [illegible]①[illegible]

B. [illegible]①[illegible]

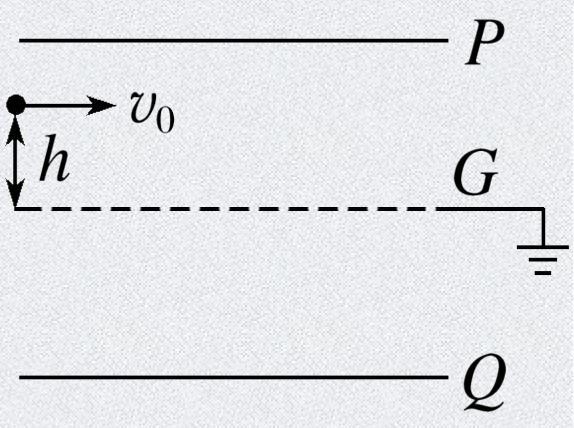
C. [illegible]②[illegible]③[illegible] 1:2

√ D. [illegible]②[illegible]③[illegible] 1:4



[illegible]

[illegible]: [illegible] P [illegible] Q [illegible] d. [illegible] [illegible] G [illegible] P [illegible] Q [illegible] G [illegible]. G [illegible] P [illegible] Q [illegible] $\varphi(\varphi>0)$. [illegible] m [illegible] $q(q>0)$ [illegible] G [illegible] G [illegible] h [illegible] [illegible] v_0 [illegible].



(1) [illegible] G [illegible]

(2) [illegible] G [illegible] + G [illegible] h [illegible]

[illegible]

$$E_k = \frac{1}{2}mv_0^2 + \frac{2\varphi}{d}qh$$

$$l = v_0\sqrt{\frac{mdh}{q\varphi}};$$